

Amendments to the Specification:

Please replace paragraph number [0028] with the following rewritten paragraph:

[0028] Electromagnetic coupling between circuit traces occurs primarily between adjacent circuit traces. In reference to Figure 4, the magnitude of the electromagnetic fields coupled, and the resulting current induced in an adjacent circuit trace 14, with a trace width ("W"), depend upon the space ("D") between the circuit traces 14, the material between the circuit traces 14, and the height ("H") between the upper surface of a substrate 12 and the upper surface of the circuit trace 14, and therefore the laterally facing surface areas, of the circuit traces 14. By placing a voltage reference trace 18 (Figure 3) between two signal traces 16, electromagnetic and electrostatic fields are coupled by the voltage reference trace 18 rather than a signal trace 16. Circuit trace fabrication technology presently allows for a minimum space of 40 μm between copper circuit traces having a height of 18 μm . The limitation on the spacing between circuit traces is related to the isotropic etching process most preferably used to form the circuit traces. Because the traces are isotropically etched, the gap between the trace is at least two times the trace thickness. This ratio, however, will certainly improve as technology improves, and will be different for other technologies used.

Please replace paragraph number [0030] with the following rewritten paragraph:

[0030] A conductive trace may begin to exhibit properties similar to that of an antenna when extended for a distance without coupling to a reference voltage. Thus, it is preferable that the voltage reference traces placed between the signal traces are periodically coupled to a reference voltage. The voltage reference traces should at least be coupled to a reference voltage at the beginning and end of the trace. More preferably, however, the voltage reference traces are coupled to a reference voltage at predetermined intervals to maintain a substantially consistent reference voltage throughout the extent of the trace. Figure 6 illustrates a substrate 12 having voltage reference traces 18 and signal traces 16 on the surface thereof, each of the voltage reference traces 18 being coupled to a ground or reference voltage plane 22 on another surface of the substrate 12 through vias 20. By periodically coupling voltage reference traces 18 to a

reference voltage plane 22 along the extents of the voltage reference traces 18, a more consistent reference voltage is maintained to more effectively reduce cross-talk between the signal traces 16. As shown in Figure 7, the principles of this invention also work with multilayer substrates 12 having a reference voltage plane 22 placed between two electrically insulative substrate layers 12, with signal traces 16 disposed on each outer surface 21. The voltage reference traces 18 from each outer surface 21 of the overall substrate may be coupled to the voltage reference plane 22 through vias 20.